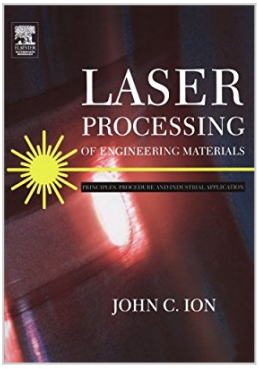

Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application

By John C. Ion

Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application By John C. Ion

The complete guide to understanding and using lasers in material processing! Lasers are now an integral part of modern society, providing extraordinary opportunities for innovation in an ever-widening range of material processing and manufacturing applications. The study of laser material processing is a core element of many materials and manufacturing courses at undergraduate and postgraduate level. As a consequence, there is now a vast amount of research on the theory and application of lasers to be absorbed by students, industrial researchers, practising engineers and production managers. Written by an acknowledged expert in the field with over twenty years' experience in laser processing, John Ion distils cutting-edge information and research into a single key text. Essential for anyone studying or working with lasers, Laser Processing of Engineering Materials provides a clear explanation of the underlying principles, including physics, chemistry and materials science, along with a framework of available laser processes and their distinguishing features and variables. This book delivers the knowledge needed to understand and apply lasers to the processing of engineering materials, and is highly recommended as a valuable guide to this revolutionary manufacturing technology.

Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application

By John C. Ion

Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application By John C. Ion

The complete guide to understanding and using lasers in material processing! Lasers are now an integral part of modern society, providing extraordinary opportunities for innovation in an ever-widening range of material processing and manufacturing applications. The study of laser material processing is a core element of many materials and manufacturing courses at undergraduate and postgraduate level. As a consequence, there is now a vast amount of research on the theory and application of lasers to be absorbed by students, industrial researchers, practising engineers and production managers. Written by an acknowledged expert in the field with over twenty years' experience in laser processing, John Ion distils cutting-edge information and research into a single key text. Essential for anyone studying or working with lasers, Laser Processing of Engineering Materials provides a clear explanation of the underlying principles, including physics, chemistry and materials science, along with a framework of available laser processes and their distinguishing features and variables. This book delivers the knowledge needed to understand and apply lasers to the processing of engineering materials, and is highly recommended as a valuable guide to this revolutionary manufacturing technology.

Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application By John C. Ion Bibliography

- Sales Rank: #3111763 in Books
- Published on: 2011-05-26
- Original language: English
- Dimensions: 10.00" h x 1.30" w x 7.00" l,
- Binding: Paperback
- 574 pages

Editorial Review

Review
"This is a truly comprehensive text in its coverage of the many diverse ways in which lasers are now used in manufacture, in the depth with which each of these is explored and in the vision for the future with which it coincides. It is a volume of lasting value."

- M.F. Ashby, University of Cambridge, UK

“Well John Ion has gone and done it. “It” being the writing of an excellent book, “Laser Processing of Engineering Materials” Not to take away from Ion’s work, but countless others, this reviewer included, have been approached to write a text on laser material processing that could be used by both undergraduate students and others interested in this the largest of commercial laser applications. And for the most part we have turned publishers down because of the sheer magnitude and difficulty of the task. To undertake it would require fantastic resources and unlimited time, factors that mitigated the undertaking by many of us.

But Ion persisted and the result is a nice piece of work that is both enlightening and useful. It took him more than 550 pages to do it but his volume is a first-class review of laser technology and the many material processing applications that this technology serves so admirably. I applaud Ion for a neat summary that serves as an introduction to laser material processing and an interesting history of the technology.

Chapters 3-17 follow the traditional outline used in other books on laser material processing except that Ion uses a more basic tutorial approach coupled with many practical examples and he ends each chapter with a very useful bibliography. And, finally, appendices include a needed glossary, designations for metal and alloys, properties of materials, analytical equations, and standards.

All in all John Ion has done a remarkable job of compiling useful information into a text that’s both educational and instructional, plus it reads well. I strongly recommend this book to those who are contemplating a serious involvement with lasers for material processing. You don’t have to be an undergraduate to get great value from this book.”

- David Belforte, Industrial Laser Solutions July, 2005

“John Ion's book is a uniformly excellent treatise on the laser processing of materials. His deep knowledge of the subject has led to a text which is easy to follow and yet is a state of the art assessment which will be exploited by researchers…I am delighted that this book has been written. It is a work of scholarship which will undoubtedly
serve us well for the decades to come.”

- John Powell, The Industrial Laser User, September 2005

“John Ion has produced a very readable book which covers the whole subject of laser materials processing. There are chapters on everything from the history of laser processing to future opportunities and, of course,

plenty of coverage of cutting, welding and surface treatments…Judging from the size and scope of the book I expected it to carry a hefty price tag - so I was pleasantly surprised by its actual cost…if you are only going to have one laser processing book in your office this would be a good one to choose."

"The complete guide to understanding and using lasers in material processing...the book is catered to various audiences, including design, manufacturing and applications engineers in industries including electronics fabrication, aerospace, automotive, tool-and-die, biomedical devices, marking and materials joining."

- Metal Forming Magazine

"This is a powerful book that every scientist, engineer, manager, and technician working in this field should possess. The book is easy to read, and the theoretical sections are separate from the more general discussions, so the reader can pick which sections to focus on. This reviewer was impressed with the conciseness of the writing and the wealth of information, all contained in a book of this length. Bravo!"
- Wayne Reitz, Reitz Consulting, The Minerals, Metals and Materials Society's JOM Book Review

"John Ion has done an excellent job in covering teh exciting field of laser processing of engineering materials in this book. It will serve as an excellent undergraduate textbook as well as a very useful reference handbook for the practicing engineer...the book has a wealth of information and is an indispensable handy reference volume." - Sudhi Sant, MRS Bulletin, Dec 2005

"Laser technology is now part of any industrial environment where precision, quality and speed are required. This book would be an excellent companion for those who intend to or are working in such an environment"
- Mohammad Jahazi, Canadian Aeronautics and Space Journal

From the Back Cover
"This is a truly comprehensive text in its coverage of the many diverse ways in which lasers are now used in manufacture, in the depth with which each of these is explored and in the vision for the future with which it coincides. It is a volume of lasting value." M.F. Ashby, University of Cambridge, UK

The complete guide to understanding and using lasers in material processing.

Lasers are now an integral part of modern society, providing extraordinary opportunities for innovation in an ever-widening range of material processing and manufacturing applications. The study of laser material processing is a core element of many materials and manufacturing courses at undergraduate and postgraduate level. As a consequence, there is now a vast amount of research on the theory and application of lasers to be absorbed by students, industrial researchers, practising engineers and production managers. Written by an acknowledged expert in the field with over twenty years' experience in laser processing, John Ion distils cutting-edge information and research into a single key text.

* The first systematic, single volume laser processing reference for students and engineers
* Covers the principles, practice and application of lasers in all contemporary industrial processes
* Packed with examples, material data and analysis, modelling techniques, plus end of chapter questions and exercises

Essential for anyone studying or working with lasers, *Laser Processing of Engineering Materials* provides a clear explanation of the underlying principles, including physics, chemistry and materials science, along with a framework of available laser processes and their distinguishing features and variables. This book delivers the knowledge needed to understand and apply lasers to the processing of engineering materials, and is

highly recommended as a valuable guide to this revolutionary manufacturing technology.

Users Review

From reader reviews:

Patricia McGuire:

Book will be written, printed, or descriptive for everything. You can know everything you want by a publication. Book has a different type. As you may know that book is important issue to bring us around the world. Close to that you can your reading skill was fluently. A publication Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application will make you to possibly be smarter. You can feel far more confidence if you can know about anything. But some of you think that open or reading some sort of book make you bored. It is not necessarily make you fun. Why they can be thought like that? Have you trying to find best book or appropriate book with you?

Lauren Smith:

Hey guys, do you desires to finds a new book to see? May be the book with the subject Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application suitable to you? Typically the book was written by popular writer in this era. The particular book untitled Laser Processing of Engineering Materials: Principles, Procedure and Industrial Applicationis one of several books which everyone read now. This book was inspired many people in the world. When you read this book you will enter the new age that you ever know prior to. The author explained their strategy in the simple way, and so all of people can easily to recognise the core of this e-book. This book will give you a great deal of information about this world now. So that you can see the represented of the world within this book.

Jennifer Buster:

In this era which is the greater man or who has ability in doing something more are more valuable than other. Do you want to become one of it? It is just simple way to have that. What you have to do is just spending your time very little but quite enough to experience a look at some books. One of many books in the top checklist in your reading list is Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application. This book and that is qualified as The Hungry Hillsides can get you closer in becoming precious person. By looking upwards and review this guide you can get many advantages.

Joan Ortega:

As a student exactly feel bored to reading. If their teacher requested them to go to the library or even make summary for some reserve, they are complained. Just very little students that has reading's heart or real their pastime. They just do what the professor want, like asked to go to the library. They go to there but nothing reading significantly. Any students feel that reading is not important, boring as well as can't see colorful photos on there. Yeah, it is to get complicated. Book is very important in your case. As we know that on this era, many ways to get whatever you want. Likewise word says, many ways to reach Chinese's country. Therefore , this Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application

can make you feel more interested to read.

Read Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application By John C. Ion for online ebook

Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application By John C. Ion Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application By John C. Ion books to read online.

Online Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application By John C. Ion ebook PDF download

Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application By John C. Ion Doc

Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application By John C. Ion Mobipocket

Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application By John C. Ion EPub

8XGDEW6V75N: Laser Processing of Engineering Materials: Principles, Procedure and Industrial Application By John C. Ion